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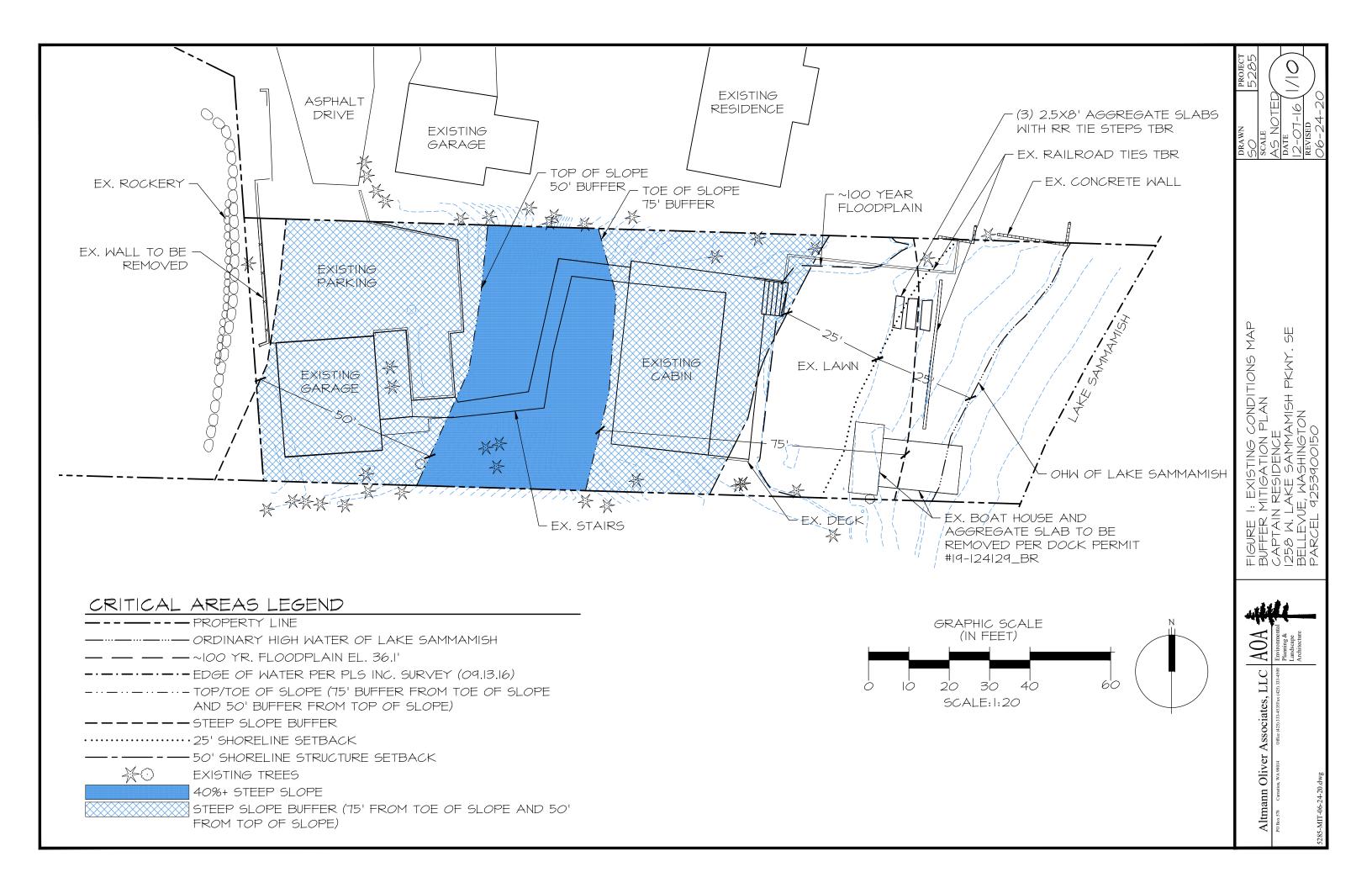
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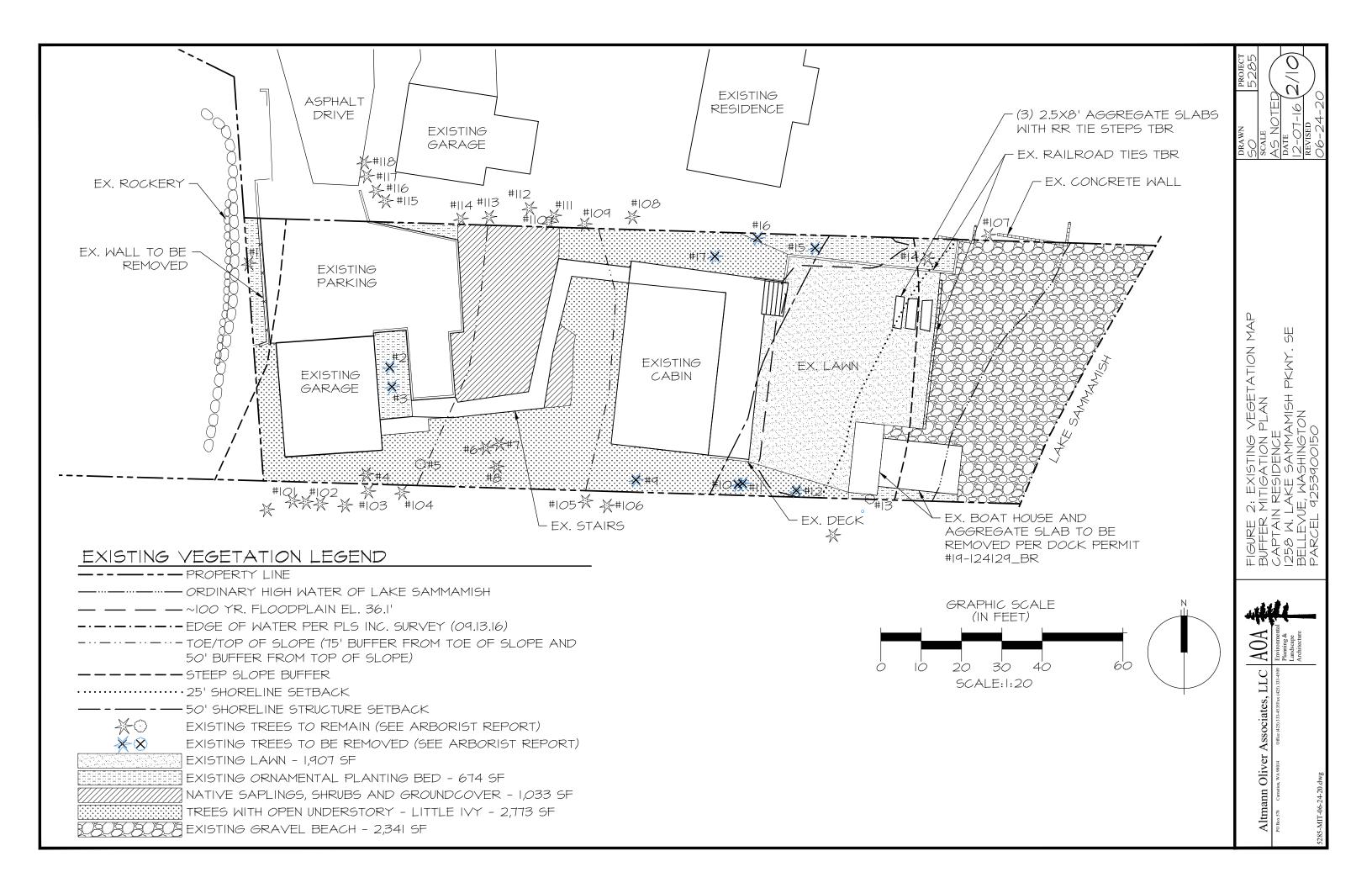
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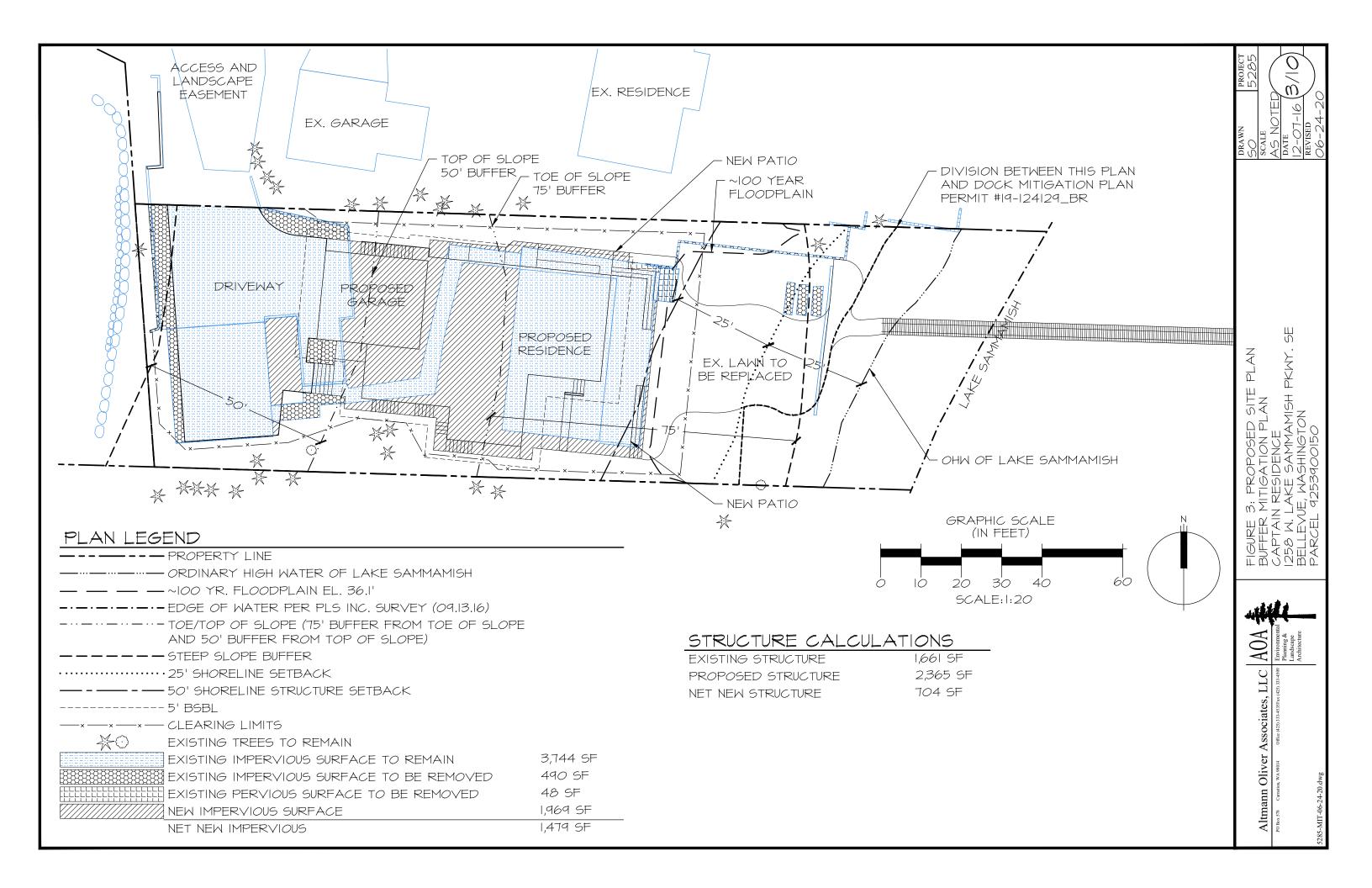
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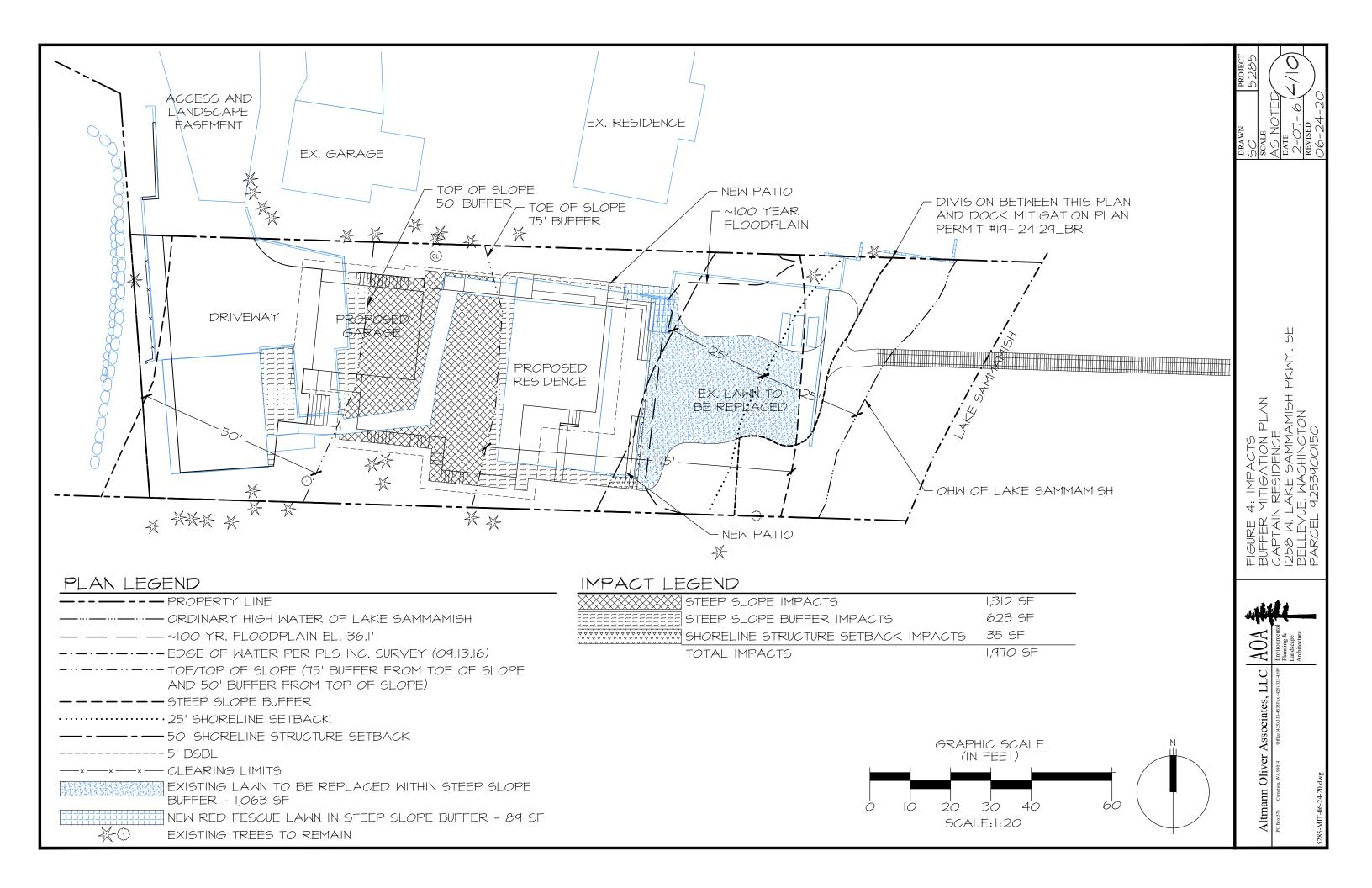
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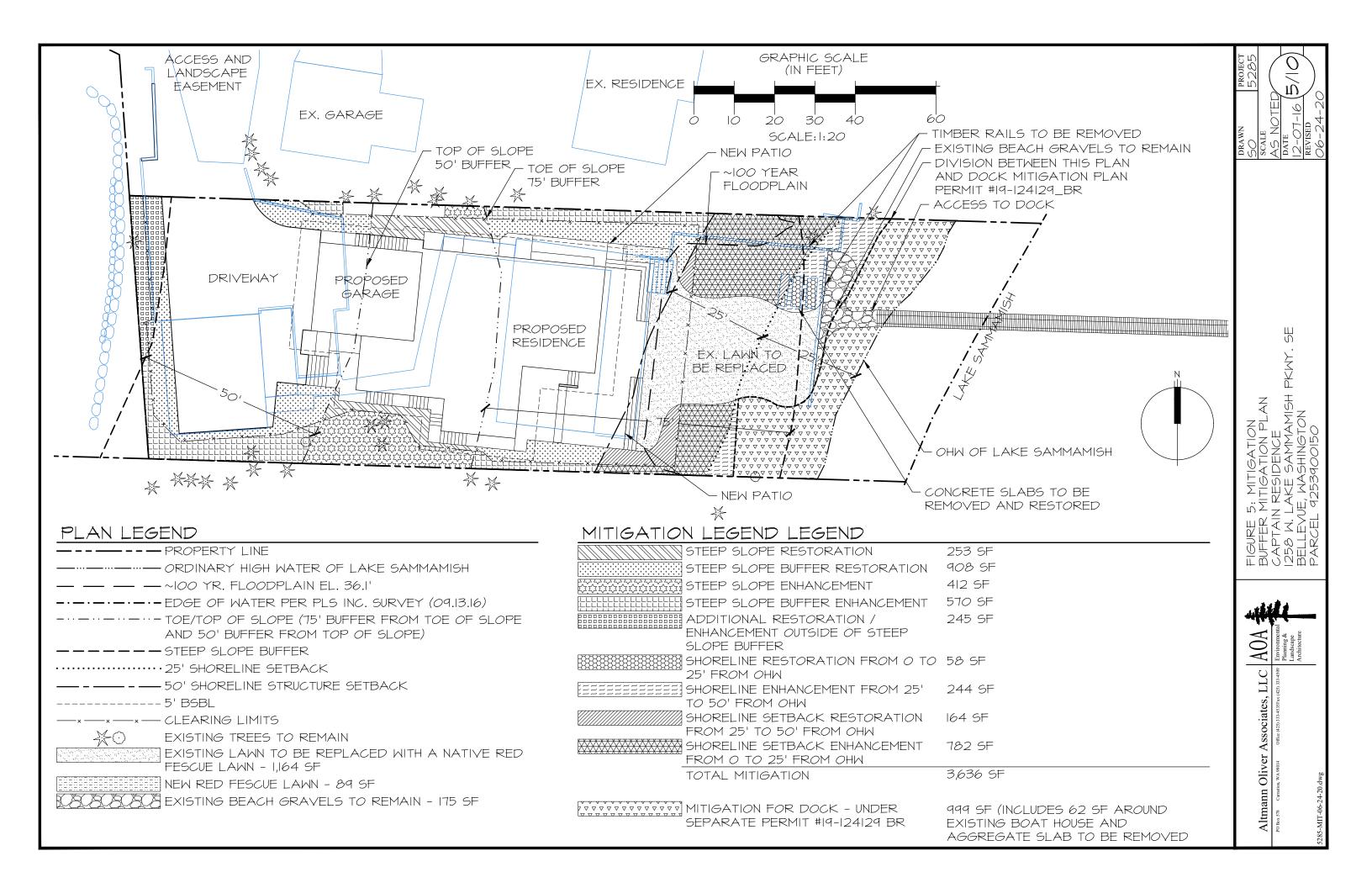
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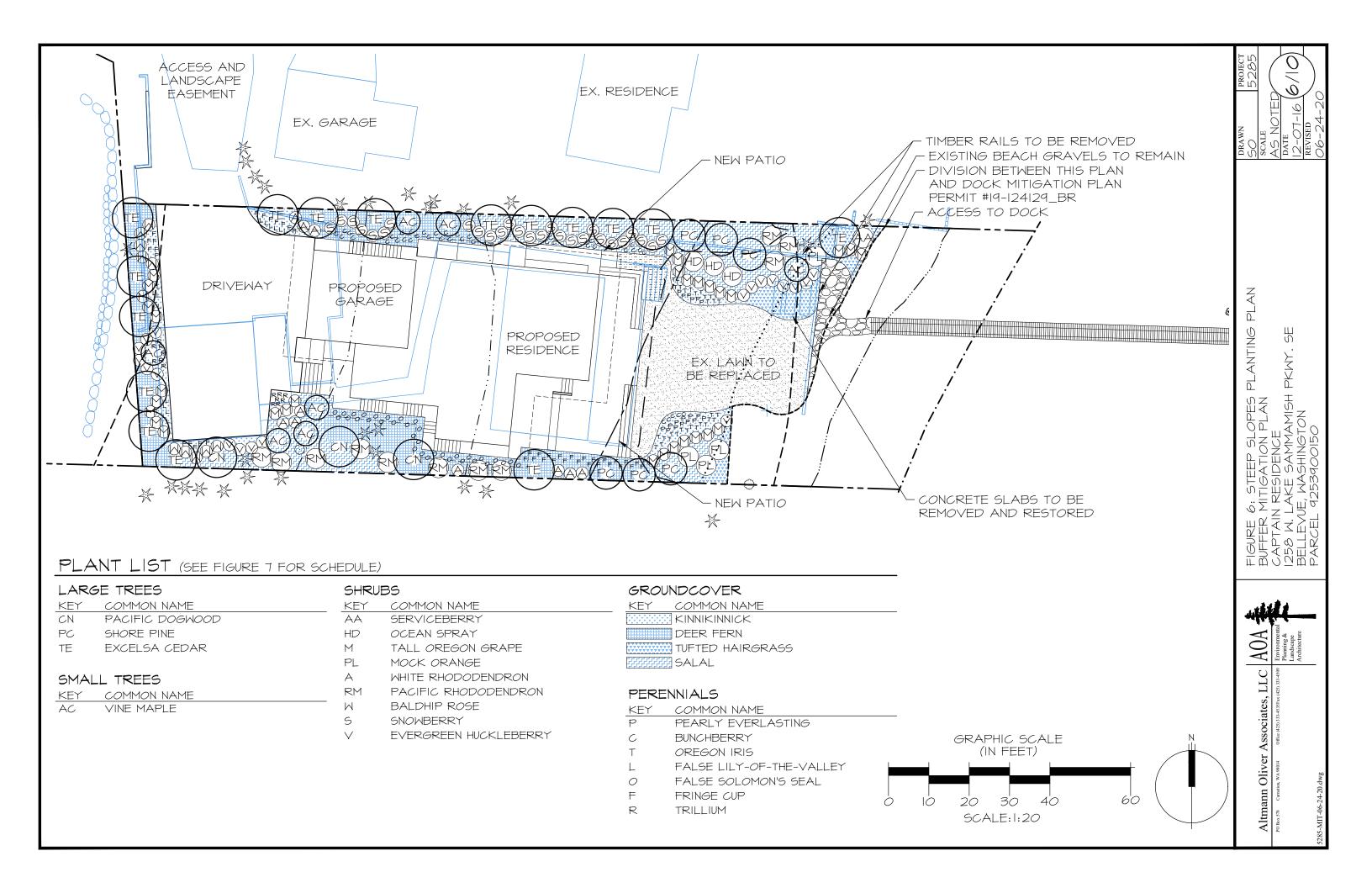












PLA	ANT SCHEDULE					
LARG	SE TREES					
KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
CN	CORNUS NUTTALII	PACIFIC DOGWOOD	10' 0.C.	3	5 <i>G</i> AL.	SINGLE TRUNK, WELL BRANCHED
PC	PINUS CONTORTA	SHORE PINE	8' O.C.	6	5 GAL.	FULL & BUSHY
TE	THUJA PLICATA 'EXCELSA'	EXCELSA CEDAR	10' 0.0.	16	5 GAL.	FULL & BUSHY
SMAL	L TREES					
KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
AC	ACER CIRCINATUM	VINE MAPLE	6' O.C.	7	5 GAL.	MULTI-STEM (3 MIN.)
SHRU	BS					
KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
AA	AMELANCHIER ALNIFOLIA	SERVICEBERRY	5' O.C.		2 GAL.	MULTI-STEM (3 MIN.)
HD	HOLODISCUS DISCOLOR	OCEAN SPRAY	5' O.C.	3	2 GAL.	MULTI-STEM (3 MIN.)
М	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	3' O.C.	31	2 GAL.	FULL & BUSHY
PL	PHILADELPHUS LEWISII	MOCK ORANGE	5' <i>O.</i> C.	4	2 GAL.	MULTI-STEM (3 MIN.)
A	RHODODENDRON ALBIFLORUM	WHITE RHODODENDRON	3' O.C.	10	2 GAL.	FULL & BUSHY
RM	RHODODENDRON MACROPHYLLUM	PACIFIC RHODODENDRON	5' <i>O.</i> C.	Ш	2 <i>G</i> AL.	FULL & BUSHY
M	ROSA GYMNOCARPA	BALDHIP ROSE	3' O.C.	10	I GAL.	MULTI-STEM (3 MIN.)
5	SYMPHORICARPOS ALBUS	SNOWBERRY	3' O.C.	27	2 GAL.	MULTI-STEM (3 MIN.)
<i>y</i>	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	2' <i>O.</i> C.	19	2 GAL.	FULL & BUSHY
GRO	JNDCOVER					
KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK	2' 0.C.	98	I GAL.	FULL & BUSHY
	BLECHNUM SPICANT	DEER FERN	2' <i>O.</i> C.	256	I GAL.	FULL & BUSHY
,	DESCHAMPIA CESPITOSA	TUFTED HAIRGRASS	2' <i>O.</i> C.	60	I GAL.	FULL & BUSHY
	GAULTHERIA SHALLON	SALAL	2' O.C.	246	I GAL.	FULL & BUSHY
PERE	INNIALS					
KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE MIN.)	NOTES
P	ANAPHALIS MARGARITACEA	PEARLY EVERLASTING	l' O.C.	18	I GAL. OR 4" POT	FULL & BUSHY
C	CORNUS CANADENSIS	BUNCHBERRY	9" O.C.	39	I GAL. OR 4" POT	FULL & BUSHY
Τ	IRIS TENAX	OREGON IRIS	l' O.C.	30	I GAL. OR 4" POT	FULL & BUSHY
L	MAIANTHEMUM DILATATUM	FALSE LILY-OF-THE-VALLEY	l' O.C.	16	I GAL. OR 4" POT	FULL & BUSHY
0	MAIANTHEMUM RACEMOSUM	FALSE SOLOMON'S SEAL	l' O.C.	34	I GAL. OR 4" POT	FULL & BUSHY
F	TELLIMA GRANDIFLORA	FRINGE CUP	l' O.C.	42	I GAL. OR 4" POT	FULL & BUSHY
R	TRILLIUM	TRILLIUM	l' O.C.	14	I GAL. OR 4" POT	FULL & BUSHY

FIGURE 7: PLANT SCHEDULE
BUFFER MITIGATION PLAN
CAPTAIN RESIDENCE
1258 M. LAKE SAMMAMISH PKMY. SE
BELLEVUE, WASHINGTON
PARCEL 9253900150 Altmann Oliver Associates, LLC AOA FORT COMMING, WA 98014 Office (425) 333-4535 Fox (425) 333-4509 Flaming & Flaming & Landscape Landscape Architecture

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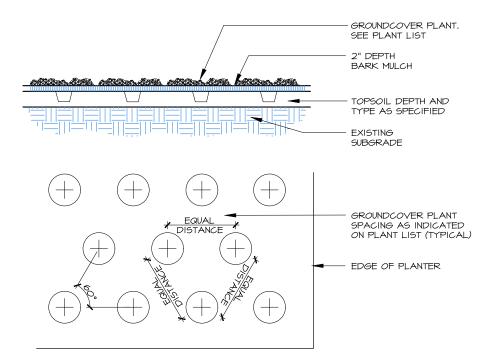
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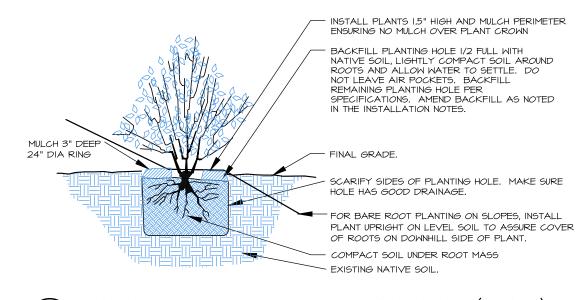
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3 GROUNDCOVER PLANTING (TYP.)
SCALE: NTS



BARE-ROOT SHRUB PLANTING (TYP.) SCALE: NTS

SHORELINE CODE

NOTE

CALCULATIONS FOR SHORELINE TYPES AND VALUES PER LUC 20.25E.065.F.8.d:

EXISTING:

IMPERVIOUS: 460 SF X 0.00 = 0.00

LAWN: 1809 SF X 0.10 = 180.90

BARE GROUND OR PERVIOUS: 899 SF X 0.15 = 134.85

NON-NATIVE VEGETATION 25-50' FROM OHWM: 203 SF X 0.25 = 50.75

NON-NATIVE VEGETATION 0-25' FROM OHWM: 47 SF X 0.30 = 14.10

NATIVE VEGETATION 25-50' FROM OHWM: 179 SF X 0.60 = 107.40

NATIVE VEGETATION 0-25' FROM OHWM: 38 SF X 0.80 = 30.40

TOTAL: 518.40

PROPOSED:

IMPERVIOUS: 94 SF X 0.00 = 0.00

LAWN: 1220 SF X 0.10 = 122.00

BARE GROUND OR PERVIOUS: 184 SF X 0.15 = 27.60

NATIVE VEGETATION 25-50' FROM OHWM: 848 SF X 0.60 = 508.80

NATIVE VEGETATION 0-25' FROM OHMM: 658 SF X 0.80 = 526.40

NATIVE OVERHANGING VEGETATION 0-10' FROM OHMM: 631 SF X 1.00 = 631.00

TOTAL: 1815.80

PROPOSED > EXISTING 1815.80 518.40

FIGURE 8: PLANTING DETAILS & SHORELINE BUFFER MITIGATION PLAN CAPTAIN RESIDENCE 1258 M. LAKE SAMMAMISH PKMY. SE BELLEVUE, MASHINGTON PARCEL 9253900150

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- I. THIS PLAN PERTAINS TO PLANTING PORTION OF THE SITE WORK ONLY.
- 2. CONTRACTOR INFORMATION. WHEN IT IS AVAILABLE, CONTACT INFORMATION SHALL BE PROVIDED TO THE CITY OF BELLEVUE THAT INCLUDES NAMES, ADDRESSES AND PHONE NUMBERS OF PERSONS/FIRMS THAT WILL BE RESPONSIBLE FOR INSTALLING REQUIRED PLANTS AND PERFORMING REQUIRED MAINTENANCE.
- 3. CONTRACTOR'S QUALIFICATIONS. ALL WORK SHALL BE PERFORMED BY A LICENSED LANDSCAPE CONTRACTOR REGISTERED IN THE STATE OF WASHINGTON. CONTRACTOR MUST BE EXPERIENCED IN MITIGATION AND RESTORATION WORK. THE CONTRACTOR SHALL PROVIDE THAT THERE IS ONE PERSON ON THE SITE AT ALL TIMES DURING WORK AND INSTALLATION WHO IS THOROUGHLY FAMILIAR WITH THE TYPE OF MATERIALS BEING INSTALLED AND THE BEST METHODS FOR THEIR INSTALLATION, AND WHO SHALL DIRECT ALL WORK BEING PERFORMED UNDER THESE SPECIFICATIONS. THIS PERSON SHALL HAVE A MINIMUM OF FIVE (5) YEARS EXPERIENCE INSTALLING NATIVE PLANT MATERIALS FOR WETLAND MITIGATION OR RESTORATION PROJECTS, UNLESS OTHERWISE ALLOWED BY THE LANDSCAPE DESIGNER, WETLAND BIOLOGIST AND/OR THE CITY OF BELLEVUE.
- 4. EXISTING STRUCTURES AND NON-NATURAL MATERIALS SHALL BE REMOVED FROM ALL MITIGATION AND LANDSCAPED AREAS PRIOR TO PLANTING.
- 5. ALL PLANTING AREAS OUTSIDE THE 100-YEAR FLOODPLAIN SHALL BE OVER-EXCAVATED 12" FOR PLACEMENT OF 12" OF IMPORTED 3-WAY TOPSOIL (DEJONG'S) OR STOCKPILED NATIVE TOPSOIL. AOA TO APPROVE TOPSOIL PRIOR TO PLACEMENT.
- 6. ALL PLANTS SHOULD BE INSTALLED BETWEEN DECEMBER IST AND MARCH 15TH.
- 1. INTERMEDIATE INSPECTIONS. ALL PLANTS SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE DESIGNER AND/OR WETLAND BIOLOGIST PRIOR TO INSTALLATION. CONDITION OF ROOTS OF A RANDOM SAMPLE OF PLANTS WILL BE INSPECTED, AS WELL AS ALL ABOVEGROUND GROWTH ON ALL PLANTS. ROOTS OF ANY BARE ROOT PLANTS, IF PERMITTED FOR USE, WILL BE INSPECTED. PLANT MATERIAL MAY BE APPROVED AT THE SOURCE, AT THE DISCRETION OF THE LANDSCAPE DESIGNER AND THE WETLAND BIOLOGIST, BUT ALL MATERIAL MUST BE RE-INSPECTED AND APPROVED ON THE SITE PRIOR TO INSTALLATION. PLANT LOCATIONS SHALL ALSO BE INSPECTED AND APPROVED PRIOR TO PLANTING.
- 8. PRIOR TO INSTALLATION OF PLANT MATERIAL, THE PLANTING AREAS WILL BE LAID OUT BASED ON THE PLANTING PLAN, AND ALL HIMALAYAN BLACKBERRY, ENGLISH IVY OR OTHER INVASIVE PLANT SPECIES LOCATED IN THE PLANTING AREAS WILL BE REMOVED BY HAND.
- 9. ALL PLANTS SHALL BE PIT-PLANTED IN PLANTING PITS EXCAVATED 2X THE DIAMETER OF THE PLANT AND PLANTED IN BURLAP SACKS FILLED WITH TOPSOIL PER SPEC #5 AND BURIED IN EXISTING BEACH GRAVELS TO 2" FROM TOP OF PLANT. PLANTS SHALL BE INSTALLED 3" HIGH AND SURFACED MULCHED TO A DEPTH OF 3" WITH MEDIUM-COURSE BARK MULCH PLACED CONTINUOUSLY THROUGHOUT THE PLANTING BED.
- IO. ALL PLANTS SHALL BE NURSERY GROWN (IN WESTERN WA OR OR) FOR AT LEAST I YEAR FROM PURCHASE DATE, FREE FROM DISEASE OR PESTS, WELL-ROOTED, BUT NOT ROOT-BOUND AND TRUE TO SPECIES.
- II. PLANT LAYOUT SHALL BE APPROVED BY AOA PRIOR TO INSTALLATION AND APPROVED UPON COMPLETION OF PLANTING.
- 12. UPON COMPLETION OF PLANTING, ALL PLANTS SHALL BE THOROUGHLY WATERED.
- 13. UPON APPROVAL OF PLANTING INSTALLATION BY AOA, THE CITY OF BELLEVUE WILL BE NOTIFIED TO CONDUCT A SITE REVIEW FOR FINAL APPROVAL OF CONSTRUCTION.
- 14. MAINTENANCE SHALL BE REQUIRED IN ACCORDANCE WITH THE CITY OF BELLEVUE SENSITIVE AREAS MITIGATION GUIDELINES AND APPROVED PLANS.
- 15. AN IRRIGATION SHALL BE DESIGN/BUILT BY LANDSCAPE CONTRACTOR TO PROVIDE SEPARATE ZONE COVERAGE TO THE LAWN AREAS VERSUS THE PLANTING BEDS.
- 16. THE ZONE TO THE PLANTING BEDS SHALL BE SET TO PROVIDE 1/2" OF FLOW 2-3 TIMES WEEKLY FROM JULY I OCTOBER 31 THE FIRST YEAR AFTER PLANTING. FLOW SHALL REDUCE TO 1-2 TIMES WEEKLY THE SECOND YEAR AFTER PLANTING AND ONCE WEEKLY THE YEARS 3-5. NO FURTHER IRRIGATION IS NECESSARY AFTER THE THIRD YEAR FOR THE NATIVE PLANTING BEDS.
- 17. THE IRRIGATION SYSTEM SHALL UTILIZE MP-3 ROTARY HEADS AND WILL HAVE A RAIN SENSOR ATTACHED.
- 18. MAINTENANCE SHALL BE IMPLEMENTED ON A REGULAR BASIS ACCORDING TO THE SCHEDULE BELOW.

ANNUAL MAINTENANCE SCHEDULE

MAINTENANCE ITEM	J	F	М	А	М	J	J	А	5	0	N	D
WEED CONTROL			- 1			1	1	I				
GENERAL MAINT.							- 1					
WATERING - YEAR I						4	8	8	8			
WATERING - YEAR 2						4	8	8	8			
WATERING - YEARS 3-5						4	4	4	4			

I-8 = NUMBER OF TIMES TASK SHALL BE PERFORMED PER MONTH.

FIGURE 4: SPECIFICATIONS
SUFFER MITIGATION PLAN
CAPTAIN RESIDENCE
258 M. LAKE SAMMAMISH PKMY. SE
SELLEVUE, MASHINGTON
PARCEL 4253400150

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CONSTRUCTION MANAGEMENT

- 1. Prior to commencement of any work in the steep slope and shoreline setback enhancement areas, the clearing limits will be staked and all existing vegetation to be saved will be clearly marked. A pre-installation meeting will be held at the site to review and discuss all aspects of the project with the owner.
- 2. A biologist will supervise plan implementation during construction to ensure that objectives and specifications of the steep slope and shoreline setback enhancement plan are met.
- 3. Any necessary significant modifications to the design that occur as a result of unforeseen site conditions will be jointly approved by the City of Bellevue and the biologist prior to their implementation.

MONITORING METHODOLOGY

- 1. The monitoring program will be conducted twice yearly (in the beginning and end of the growing season) for a period of five years, with reports submitted annually (at the end of the growing season) to the City of Bellevue.
- 2. Vegetation establishment within the steep slope and shoreline setback enhancement areas will be monitored during each field visit with a record kept of all plant species found.
- 3. Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress in plant community establishment in the enhancement areas. Review of the photos over time will provide a semi-quantitative representation of success of the enhancement plan.

PERFORMANCE STANDARDS

Success of plant establishment within the steep slope and shoreline setback enhancement areas will be evaluated on the basis of percent survival of planted species.

- 1. Native woody cover will be a minimum of; 10% at construction completion, 15% at year 1, 20% at year 2, 25% at year 3 and 40% at year 5.
- 2. There will be 100% survival of all woody planted species throughout the mitigation planted area at the end of the first year of planting. For years 2-5, success will be based on an 85% survival rate or similar number of recolonized native woody plants.
- 3. Exotic and invasive plant species will be maintained at levels below 10% total cover. Removal of these species will occur immediately following the monitoring event in which they surpass the above maximum coverage. Removal will occur by hand whenever possible.

MAINTENANCE (M) & CONTINGENCY (C)

- 1. Established performance standards for the project will be compared to the monitoring results in order to judge the success of the enhancement project.
- 2. Contingency will include many of the items listed below and would be implemented if these performance standards are not met.
- 3. Maintenance and remedial action on the site will be implemented immediately upon completion of the monitoring event, (unless otherwise specifically indicated below).
- replace dead plants with the same species or a substitute species that meet the goal of the enhancement plan (C)
- re-plant areas after reason for failure has been identified (e.q., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.) (C)
- irrigate following plant installation for five years (M)

PERFORMANCE BOND

- I. A performance bond or other surety device will be posted with the City of Bellevue by the applicant to cover the costs of steep slope and shoreline setback enhancement plan implementation (including labor, materials, maintenance, and monitoring).
- 2. The bond or assignment may be released in partial amounts in proportion to work successfully completed over the five year monitoring period, as the applicant demonstrates performance and corrective measures.

<u>D</u> MONITORING PKX Y ₩ FIGURE 10: MAINTENANCE & BUFFER MITIGATION PLAN CAPTAIN RESIDENCE 1258 M. LAKE SAMMAMISH PELLEVUE, MASHINGTON PARCEL 9253900150

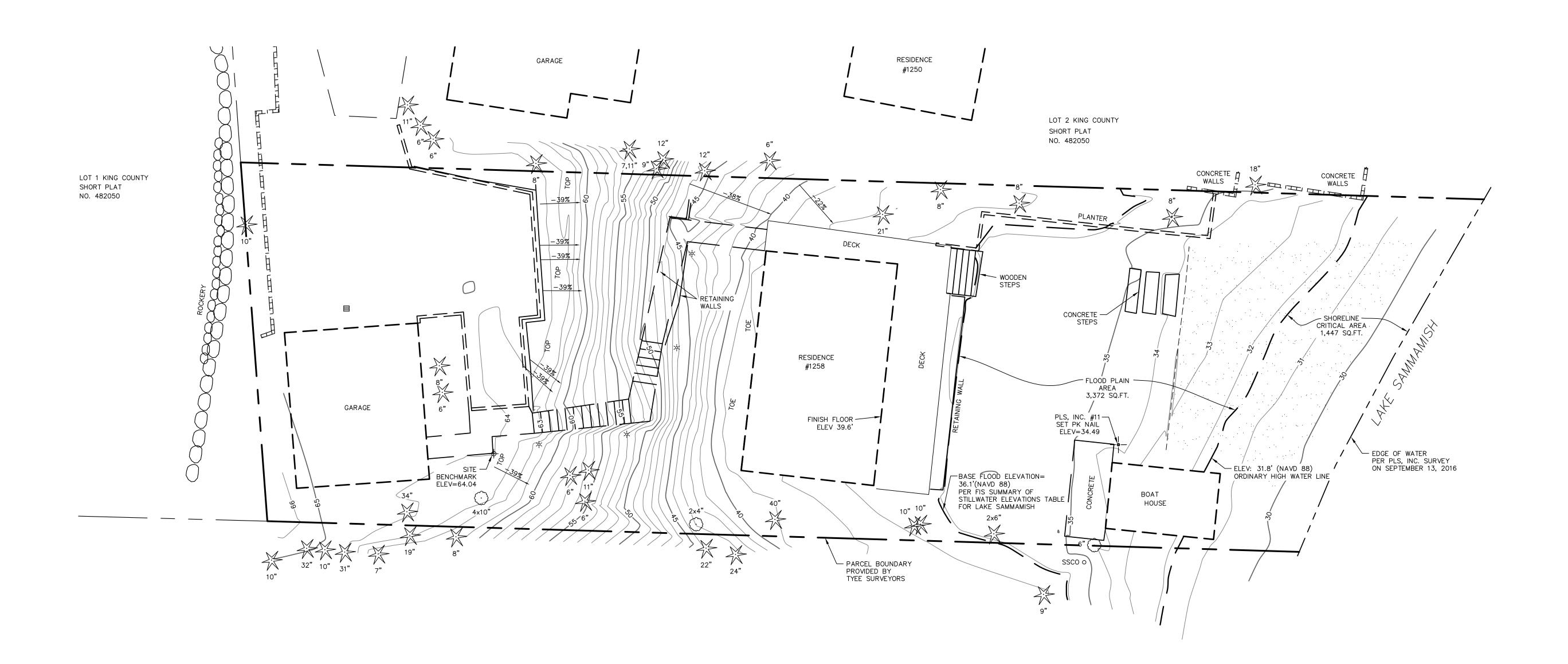
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Associates, LLC

Altmann Oliver

TOPOGRAPHIC SURVEY

SE 1/4 NW 1/4 SEC. 1 TOWNSHIP 24 NORTH, RANGE 5 EAST W.M. KING COUNTY, WASHINGTON



LEGAL DESCRIPTION:

(PER STATUTORY WARRANTY DEED, KING COUNTY RECORDING NO. 20040416002249) THAT PORTION OF THE NORTH 65 FEET OF THE SOUTH 785 FEET OF GOVERNMENT LOT 2 IN SECTION 1 OF TOWNSHIP 24 NORTH IN RANGE 5 EAST, W.M., LYING EASTERLY OF THE FOLLOWING

BEGINNING AT THE INTERSECTION OF THE EASTERLY MARGIN OF WEST LAKE SAMMAMISH BOULEVARD SOUTHEAST RIGHT-OF-WAY WITH A LINE DISTANT 720 FEET NORTH OF AND PARALLEL TO THE SOUTH LINE OF SAID GOVERNMENT LOT 2; THENCE SOUTH 89°38'26" EAST, ALONG SAID LINE PARALLEL TO THE SOUTH LINE OF SAID GOVERNMENT LOT 2, A DISTANCE OF 181.21 FEET TO THE TRUE POINT OF BEGINNING OF THIS LINE;

THENCE NORTH 5°35'26" WEST A DISTANCE OF 65.35 FEET TO THE NORTH LINE OF SAID SOUTH

785 FEET AND THE TERMINUS OF THIS LINE; (ALSO KNOWN AS A PORTION OF TRACTS 28 AND 29 OF WEOWNA BEACH TRACTS, UNRECORDED)

TOGETHER WITH SECOND CLASS SHORE LANDS AS CONVEYED BY THE STATE OF WASHINGTON SITUATE IN FRONT OF, ADJACENT TO OR ABUTTING THEREON;

AND TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS AS DESCRIBED IN INSTRUMENTS RECORDED UNDER KING COUNTY RECORDING NO'S. 3162965, 5841599, 5989270, 6041792,

AND TOGETHER WITH AN EASEMENT FOR LANDSCAPING AND ACCESS AS CREATED UNDER KING COUNTY RECORDING NO. 20040416002247.

SITUATE IN THE COUNTY OF BELLEVUE, COUNTY OF KING, STATE OF WASHINGTON.

NOTES AND COMMENTS:

1.) PURPOSE OF SURVEY: THE PURPOSE OF THIS SURVEY WAS TO DEVELOP A 1-FOOT CONTOUR INTERVAL TOPOGRAPHIC MAP OF THE SUBJECT PROPERTY FOR USE AS A PLANNING AND DESIGN

2.) HORIZONTAL DATUM: THE OVERALL HORIZONTAL DATUM FOR THIS PROJECT IS NAD 83/2011, WASHINGTON COORDINATE SYSTEM, NORTH ZONE, BASED ON GPS MEASUREMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.

3.) <u>VERTICAL DATUM:</u> THE VERTICAL DATUM FOR THIS SURVEY IS NAVD 88, BASED ON GPS MÉASUREMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.

4.) FIELD SURVEY METHODOLOGY: FIELD MEASUREMENTS FOR THIS SURVEY WERE PERFORMED USING A 5-SECOND OR BETTER ELECTRONIC TOTAL STATION.

5.) INSTRUMENT CALIBRATION: ALL MEASURING INSTRUMENTS EMPLOYED IN THIS SURVEY HAVE BEEN

MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. 6.) THE PLS, INC. PORTION OF THIS MAP GRAPHICALLY REPRESENTS CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY ONLY, WHICH WAS PERFORMED DURING FEBRUARY 2, 2016

SEPTEMBER 13 OF 2016, AND MARCH 10, 2020.

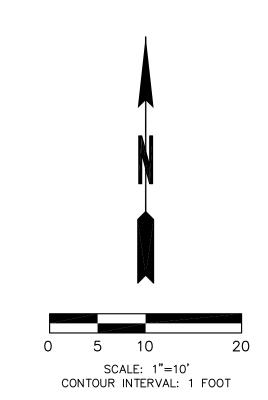
7.) THIS SURVEY WAS PREPARED FOR THE <u>EXCLUSIVE</u> USE OF THE CLIENT NAMED HEREON. ITS' USE DOES NOT EXTEND TO ANY UNNAMED PERSON OR PERSONS WITHOUT THE EXPRESS RECERTIFICATION BY THIS SURVEYOR NAMING SUCH PARTY.

8.) FOR YOUR INFORMATION: 0.0833 FEET = 1 INCH ON THE GROUND

9.) KING COUNTY TAX PARCEL NUMBER: 9253900150

10.) THE PROPERTY AND PUBLIC RIGHT-OF-WAY LINES SHOWN HEREON WERE PROVIDED BY TYEE SURVEYORS.

11.) AREA OF PARCEL: 13,381 ± SQ. FT. (0.31 ACRES) BASED ON SEPTEMBER 2016 SHORELINE. 12.) FOR CLARITY PURPOSES WE HAVE USED GRAPHIC SYMBOLS TO REPRESENT SOME FEATURES ON THIS MAP, SUCH AS UTILITIES, TREES AND FENCES. THE DEFAULT SIZE OF THOSE SYMBOLS MAY NOT REFLECT THE TRUE SIZE OF THE FEATURE THAT WAS MAPPED.



LEGEND:	
+	SITE BENCH MARK
**	TREE (CONIFEROUS) WITH TRUNK DIAMETER NOTED
\bigcirc	TREE (DECIDUOUS) WITH TRUNK DIAMETER NOTED
*	YARD LIGHT
	AREA DRAIN
o SSCO	SANITARY SEWER CLEAN OUT (SSCO)
	GRAVEL SURFACE

Professional Land	1375 NW Mall Street, #3	Issaquah, Washington 9	(425) 313-9378 (fax) 31

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	BY	ВРМ					
REVISIONS	DESCRIPTION	ADDED ORDINARY HIGH WATER LINE, FLOOD PLAIN AREA AND SHORELINE CRITICAL AREA					
	DATE	3/25/20					
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Altmann Oliver Associates, LLC

PO Box 578

Carnation, WA 98014

Office (425) 333-4535

Fax (425) 333-4509



June 25, 2020

AOA-5285

Roy and Catherine Captain roycaptain@gmail.com catherine.captain@gmail.com

SUBJECT: Critical Areas Report - Habitat Assessment - Captain Residence

1258 W. Lake Sammamish Pkwy SE, Bellevue, WA

Steep Slope and Shoreline Structure Setback Modification and

Enhancement

Dear Roy and Catherine:

On October 3, 2016 I conducted an initial wetland and stream reconnaissance and habitat assessment on the subject property located along the shoreline of the west side of Lake Sammamish. Additional site visits were conducted by AOA in the spring of 2020. The primary purpose of the site visits was to assess proposed modifications to the steep slope, steep slope buffer, and shoreline habitat functions as part of a proposed re-development of the property to replace an existing residence with a new single-family residence. See the geotechnical report by Geotechnical Consultants, Inc. and steep slope analysis for proposed development by Cobalt Geosciences, LLC for information pertaining to slope stability and geotechnical performance standards.

No wetlands or streams were identified on the site utilizing the methodology outlined in the May 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0).

1.0 EXISTING CONDITIONS

The central portion of the site is developed with a small single-family residence. Maintained lawn extended east from the residence to the edge of a gravel beach located along the shoreline. An existing covered pavilion is located in the southeast corner of the property.

A steep slope is located immediately west of the residence. An existing garage and parking area are located at the top of the slope in the far western portion of the site. A stairway extends from the parking area down the steep slope to the residence.

Native vegetation on the property is generally restricted to scattered trees along the perimeter of the site (see tree survey) and on the steep slope between the residence and the garage. Vegetation on the steep slope included western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), salal (*Gaultheria shallon*), hazelnut (*Corylus cornuta*), tall Oregongrape (*Mahonia aquifolium*), sword fern (*Polystichum munitum*), and bracken fern (*Pteridium aquilinum*), with patches of invasive Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), and holly (*Ilex* sp.) also observed.

The entire property has been maintained and no habitat features such as snags or downed logs were observed.

2.0 CRITICAL AREA IMPACTS

Lake Sammamish requires a 50-foot shoreline structure setback from the ordinary high water of the lake adjacent Shoreline Residential uses per LUC Chart 20.25E.065.C.2. Steep slopes require a standard 75-foot buffer from the toe of the slope and a 50-foot buffer from the top of the slope.

2.1 Shoreline Structure Setback

The proposed new residence would be constructed in the same general location as the existing residence and there would be no expansion of the structure footprint within the 50-foot shoreline structure setback. Work that would occur within the shoreline setback includes the removal of the existing boat house (as part of the separate dock permit #19-124129 BR) and concrete slabs and replacing with designated soft shoreline enhancements consisting of trees, shrubs, and groundcover plantings.

The City of Bellevue requires that pre- and post-construction shoreline land uses utilize the credits and debits found in LUC Chart 20.25E.065.F.8.d.

EXISTING CONDITIONS:

IMPERVIOUS: 460 SF X 0.00 = 0.00 LAWN: 1809 SF X 0.10 = 180.90

BARE GROUND OR PERVIOUS: 899 SF X 0.15 = 134.85

NON-NATIVE VEGETATION 25-50' FROM OHWM: 203 SF X 0.25 = 50.75 NON-NATIVE VEGETATION 0-25' FROM OHWM: 47 SF X 0.30 = 14.10 NATIVE VEGETATION 25-50' FROM OHWM: 179 SF X 0.60 = 107.40 NATIVE VEGETATION 0-25' FROM OHWM: 38 SF X 0.80 = 30.40

TOTAL: 518.40

PROPOSED CONDITIONS:

IMPERVIOUS: 94 SF X 0.00 = 0.00 LAWN: 1220 SF X 0.10 = 122.00

BARE GROUND OR PERVIOUS: 184 SF X 0.15 = 27.60

NATIVE VEGETATION 25-50' FROM OHWM: 848 SF X 0.60 = 508.80 NATIVE VEGETATION 0-25' FROM OHWM: 658 SF X 0.80 = 526.40

NATIVE OVERHANGING VEGETATION 0-10' FROM OHWM: 631 SF X 1.00 =

631.00

TOTAL: 1815.80

PROPOSED > EXISTING 1815.80 > 518.40

2.2 Steep Slope and Steep Slope Buffer

The existing residence is located at the toe of the steep slope on the site. Because of topographic and shoreline setback constraints, expansion of the residence is not possible without encroaching into this steep slope and its buffer. The stability of the slope was evaluated by Geotech Consultants, Inc.

As part of the proposed project, expansion of the existing residence would encroach into 1,312 s.f. of steep slope and 623 s.f. of steep slope buffer. The overall slope area that would be impacted includes some native and ornamental trees as well as invasives including English ivy and Himalayan blackberry.

Development within a critical area steep slope and its buffer are subject to the applicable performance standards outlined in BMC 20.25H.125 (see geotech report for performance standards related to slope stability). As part of these performance standards, all areas of disturbance within the critical area and its buffer must be mitigated per an approved mitigation/restoration plan.

The new residence will be constructed in the same general location as the existing residence and has been designed to avoid encroaching into the shoreline structure setback. Vegetation to be removed on the slope has been minimized to the extent feasible but does include the required removal of several trees along the site perimeter. Understory vegetation within the impacted slope buffer and setback areas is typically sparse and degraded and does not provide any significant habitat.

Mitigation for the unavoidable tree loss will occur through the implementation of a mitigation planting plan that will restore and enhance portions of the slope and buffer. Mitigation for the slope impacts and tree removal will also occur through significant restoration and enhancement of the shoreline environment.

Shoreline enhancement includes the removal of impervious surfaces as well as portions of the existing lawn. The shoreline setback would then be planted with a variety of native species to significantly increase the habitat value of the shoreline environment and provide a connected corridor between the shoreline and slope enhancement areas. The enhanced shoreline environment would also provide additional soil stability during high winter lake elevations and add natural detritus into the lake.

3.0 CRITICAL AREA MITIGATION

3.1 Shoreline Structure Setback

Mitigation within the shoreline includes the removal of impervious surfaces and enhancing the area with a wide variety of native plantings. In addition, much of the existing yard would also be restored with native plantings. Planting the area with native species would increase the plant species and structural diversity over existing conditions and will increase food chain support by increasing the biological production of both vegetation and insects. This in turn should provide food and cover for a variety of song birds and other wildlife and increase the habitat and stability functions of the shoreline.

3.2 Steep Slope and Buffer

As part of the proposed project, all of the preserved steep slope and buffer areas would be restored and enhanced by: 1) removing English ivy and other invasive species, and 2) planting with a variety of native species to increase the plant species and structural diversity of the slope. This planting should increase the overall habitat value of the slope and provide a connection between the slope and shoreline.

3.3 Goal, Objectives, and Performance Standards for Mitigation AreasThe primary goal of the mitigation plan is to increase the habitat functions of the shoreline and slope areas. To meet this goal, the following objectives and performance standards have been incorporated into the design of the plan:

Objective A: Increase the structural and plant species diversity within the mitigation area.

<u>Performance Standard:</u> There will be 100% survival of all woody planted species throughout the mitigation area at the end of the first year of planting. For Years 2-5, success will be based on an 85% survival rate or similar number of recolonized native woody plants. Areal coverage of plantings or native re-colonized species will be at least 15% at Year 1, 20% at Year 2, 25% at Year 3, and 40% at Year 5.

Objective B: Limit the amount of invasive and exotic species within the mitigation area.

<u>Performance Standard:</u> After construction and following every monitoring event for a period of five years, exotic and invasive plant species will be maintained at levels below 10% total cover in the designated mitigation areas. Invasive species include, but are not limited to, Himalayan and evergreen blackberry, Japanese knotweed, and English ivy.

3.4 Construction Management

Prior to commencement of any work in the mitigation areas, the clearing limits will be staked and any existing vegetation to be saved will be clearly marked. A preconstruction meeting will be held at the site to review and discuss all aspects of the project with the landscape contractor and the owner.

A consultant will supervise plan implementation during construction to ensure that objectives and specifications of the mitigation plan are met. Any necessary significant modifications to the design that occur as a result of unforeseen site conditions will be jointly approved by the City of Bellevue and the consultant prior to their implementation.

3.5 Monitoring Methodology

The monitoring program will be conducted for a period of five years, with annual reports submitted to the City. Vegetation monitoring will include general appearance, health, mortality, colonization rates, percent cover, percent survival, volunteer plant species, and invasive weeds.

Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress in plant community establishment in the mitigation area. Review of the photos over time will provide a visual representation of success of the mitigation plan.

3.6 Maintenance Plan

Maintenance will be conducted on a routine, year-round basis. Additional maintenance needs will be identified and addressed following periodic maintenance reviews. Contingency measures and remedial action on the site shall be implemented on an as-needed basis at the direction of the consultant or the owner.

3.7 Weed Control

Routine removal and control of non-native and other invasive plants within the designated mitigation areas shall be performed by manual means. Undesirable and weedy exotic plant species shall be maintained at levels below 10% total cover within all mitigation areas during the monitoring period.

3.8 General Maintenance Items

Routine maintenance of planted trees and shrubs shall be performed. Measures include resetting plants to proper grades and upright positions. Tall grasses and other competitive weeds shall be weeded at the base of plants to prevent engulfment. Weed control should be performed by hand removal.

3.9 Contingency Plan

All dead plants will be replaced with the same species or an approved substitute species that meets the goal of the mitigation plan. Plant material shall meet the same specifications as originally installed material. Replanting will not occur until after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.). Replanting shall be completed under the direction of the consultant, City of Bellevue, or the owner.

3.10 As-Built Plan

Following completion of construction activities, an as-built plan for the mitigation area will be provided to the City of Bellevue. The plan will identify and describe any changes in relation to the original approved plan.

4.0 FUNCTIONAL ASSESSMENT TOOL

The project site was evaluated using the City of Bellevue's *Draft Functional Assessment Tool for Upland Habitat* (Attachment A). Based on this assessment the project site received a score of 36. In general, sites with scores between 26 and 40 "provide both actual habitat and likely the opportunity for wildlife to use the habitat on the site."

The project site received relatively high scores for its proximity to Lake Sammamish and a biodiversity corridor located to the west of West Lake Sammamish Parkway. The property was also awarded habitat points by the presence of large coniferous trees.

Limiting factors on the site included the lack of habitat features and a relatively low vegetative vertical structural diversity. In addition, although located close to the biodiversity corridor on the west side of West Lake Sammamish Parkway, the site is entirely surrounded by development and effectively disconnected from the corridor. Furthermore, the existing shoreline of Lake Sammamish is developed and does not provide a significant habitat area.

Since no significant native plant communities would be removed as part of the proposed project, there are no anticipated impacts to any species of local importance.

If you have any questions regarding the critical areas study, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC

John Altmann

Ecologist

ATTACHMENT A DRAFT FUNCTIONAL ASSESSMENT TOOL FOR UPLAND HABITAT

City of Bellevue DRAFT FUNCTIONAL ASSESSMENT TOOL for Upland Habitat

Property address 1258 WESTLAKE SAMM. PKWTSI	Project name WEOWNA POINT
Location Range 5 E Township 24 N Section 1	Project contact July A TMANN
Parcel number 925390-0150	Telephone number(\(\frac{123}{23}\) - \(\frac{333}{25}\)
Property owner	Address PO BOX 518 CAPNATION, WA 9801
Telephone number ()	•
Staff JOHN ALTMANN	Date(s) of site visit(s) OCT 3, 2016
Washington Department of Fish and Wildlife Priority Habitat and	d Species (PHS) data obtained? Y/N

1.0	PROPERTY DESIGNATION	Zone A	Zone B	Zone C	Zone D		Zone
1.1	Existing impervious surface	>90%	50-90%	20-50%	0-20%	442%	C
2.0	LANDSCAPE PARAMETERS	No points	1 point	2 points	3 points	Additional points	Total
2.1	Land use/development density	Zone A	Zone B	Zone C	Zone D		2
2.2	*Occurrence (number) of habitat types	0	1	2	3+		3
2.3	**Proximity of known critical areas (distance to edge)	>2,500 ft	<2,500 ft	<1,200 ft	<100 ft	+1 point if contiguous with critical area	4
2.4	Habitat connectivity and corridors	No connection to other habitat areas	≥50-foot-wide connection to vegetated areas of at least 1 acre	≥50-foot-wide connection to vegetated areas of at least 50 acres but not listed parks***	≥50-foot-wide connection King County wildlife network or listed parks***	+1 point for ≥150- foot-wide connection King County wildlife network or listed parks***	0
2.5	Patch size	<01.0 ac	1.0-5.0 ac	>5-10 ac	10-42 acres	>42 acres = 4 points	3

City of Bellevue DRAFT FUNCTIONAL ASSESSMENT TOOL for upland habitat

2.0	LANDSCAPE PARAMETERS	No points	1 point	2 points	3 points	Additional points	Total
2.6	*Interspersion of habitat patches (excluding patches <1 ac in area)	No or isolated patch (no others within 0.5-ac circle)	Low	Moderate	High	+1 point if wildlife network or listed park is included	2
3.0	LOCAL PARAMETERS	No points	1 point	2 points	3 points	Additional points	Total
3.1	Size of native trees on site	No significant trees on site	6-12" dbh tree(s) present	12-20" dbh tree(s) present	>20" dbh tree(s) present	+1 point if tree(s) >30" dbh are present	
3.2	Coniferous component	No conifers on site	Conifers very sparse or present in understory only	Conifers co- or sub-dominant in overstory	Conifers dominant	+1 point if conifers >30" dbh are present	3
3.3	Percent cover (sample vegetated areas only)						
	Ground layer (0-2.3 ft) (5-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%; -1 point if mowed grass is >50%	3
	Shrub layer (2.3-25 ft) (10-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%	2_
	Canopy (>25 ft) (30-ft radius)	0%	0-25%	25-50%	50%+	+1 point for cover >75%	2
3.4	Vegetative vertical structural diversity (foliage height diversity)	FHD = 0	FHD < 0.70	FHD = 0.70- 0.90	FHD-> 0.90		: Military An Acade
3.5	Vegetative species richness	0-1 species	2-5 species	6-19 species	20+ species		2
3.6	Invasive species component	>75% cover	25-75% cover	10-25%cover	<10% cover		2

Comblet versiles live La Cana

City of Bellevue DRAFT FUNCTIONAL ASSESSMENT TOOL for Upland Habitat

3.0	LOCAL PARAMETERS	No points	1 point	2 points	3 points	Additional points	Total
3.7	Proximity to year-round water	>1.0 mi or artificial feature with maintained /invasive buffer present within 0.3-1 mi	0.3-1.0 mi or artificial feature with maintained/ invasive buffer present within <0.3 mi	<0.3 mi or artificial feature with maintained/ invasive buffer present within patch	Natural water feature present within patch with native buffer		2_
3.8	Snags (≥4 in dbh)	No snags on site	1/ac or fewer	2-6/ac	>7/ac	Add 0.5 point for each >20 in dbh and 1 point for each >30 in dbh	0
3.9	Other habitat features	None	Stump 1	2-4	5 or more		1
Land	scape parameters points						14
Local	l parameters points						22
TOTA	AL POINTS						36

^{*} Use circle of the appropriate size for the property's zone:

Zone A - 0.5 ac

Zone B - 5.0 ac

Zone C - 100 ac

Zone D - 250 ac

^{**} PHS data required for sites in Zone D

^{***}Parks: Mercer Slough, Phantom Lake wetland complex, Larson Lake wetland complex, Cougar Mountain Regional Wildland Park, Weowna Park; King County wildlife network